



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[EPA-HQ-OAR-2007-0089; FRL-9779-3]

RIN 2060-AO17

Air Quality: Revision to Definition of Volatile Organic Compounds - Exclusion of a Group of Four Hydrofluoropolyethers (HFPEs)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action revises the definition of volatile organic compounds (VOCs) under the Clean Air Act (CAA). This revision adds four chemical compounds to the list of compounds excluded from the definition of VOC on the basis that each of these compounds makes a negligible contribution to tropospheric ozone formation. These compounds consist of four hydrofluoropolyethers (HFPEs) which are identified as $\text{HCF}_2\text{OCF}_2\text{H}$ (also known as HFE-134), $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$ (also known as HFE-236cal2), $\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$ (also known as HFE-338pcc13), and $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$ (also known as H-Galden 1040X or H-Galden ZT 130 (or 150 or 180)). If an entity uses or produces any of these four HFPE compounds (these being in the family of products known by the trade name H-Galden) and is subject to the EPA regulations limiting the use of VOC in a product, limiting the VOC emissions from a facility, or otherwise controlling the use of VOC for purposes related to attaining the ozone national ambient air quality standards (NAAQS), then the compound will not be counted as a VOC in determining whether these regulatory obligations have been met.

This action may also affect whether any of these compounds is considered a VOC for state regulatory purposes, depending on whether the state relies on the EPA's definition of VOC. In addition, the EPA is making certain technical corrections to the current list of exempt compounds.

DATES: The final rule is effective on **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2007-0089. All documents in the docket are listed on the *www.regulations.gov* website. Although listed in the index, some information is not publicly available, i.e., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Docket ID No. EPA-HQ-OAR-2007-0089, EPA/DC, EPA West, Room 3334, 1301 Constitution Avenue, Northwest, Washington, D.C. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: David Sanders, Office of Air Quality Planning and Standards, Air Quality Policy Division, State and Local Programs Group, Mail Code (C539-01), Environmental Protection Agency, Research Triangle Park, N.C. 27711; telephone (919) 541-3356 or fax (919) 541-0824; and email address: *sanders.dave@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

Entities potentially affected by this final rule include, but are not necessarily limited to, states (typically state air pollution control agencies) that control VOCs, and industries listed in the following table involved in the manufacture or use of fire suppressants and specialized refrigerants in secondary loop refrigeration systems for heat transfer. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities that the EPA is now aware of that could potentially be affected by this action. Other types of entities not listed in the table could also be affected. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section. This action has no substantial direct effects on industry because it does not impose any new mandates on these entities, but, to the contrary, removes these four HFPEs from the regulatory definition of VOC.

This final rule is applicable to all manufacturers, distributors and users of these chemical compounds as identified in Table 1.

TABLE 1—POTENTIALLY AFFECTED REGULATED CATEGORIES AND ENTITIES

Industry group	SIC ^a	NAICS ^b
Fire Suppression	2899	325998, 423990

Refrigerants	2869, 3585	238220, 336111
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^a Standard Industrial Classification.

^b North American Industry Classification System.

B. How is this preamble organized?

The information presented in this preamble is organized as follows:

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 - I. National Technology Transfer and Advancement Act
 - J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
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II. Proposed Action

A. The EPA's VOC Exemption Policy

Tropospheric ozone, commonly known as smog, is formed when VOCs and nitrogen oxides (NO_x) react in the atmosphere in the presence of sunlight. Because of the harmful health effects of ozone, the EPA and state governments limit the amount of VOCs that can be released into the atmosphere. VOCs are those organic compounds of carbon which form ozone through atmospheric photochemical reactions. Different VOCs have different levels of reactivity. That is, they do not react to form ozone at the same speed or do not form ozone to the same extent. Some VOCs react slowly or form less ozone; therefore, changes in their emissions have limited effects on local or regional ozone pollution episodes. It has been the EPA's policy that organic compounds with a negligible level of reactivity should be excluded from the regulatory VOC definition so as to focus VOC control efforts on compounds that do significantly increase ozone concentrations. The EPA also believes that exempting such compounds creates an incentive for industry to use negligibly reactive compounds in place of more highly reactive compounds that are regulated as VOCs. The EPA lists compounds that it has determined to be negligibly reactive in its regulations as being excluded from the definition of VOC (40 CFR 51.100(s)).

The CAA requires the regulation of VOCs for various purposes. Section 302(s) of the CAA specifies that the EPA has the authority to define the meaning of "VOC," and hence what compounds shall be treated as VOCs for regulatory purposes. The policy of excluding negligibly reactive compounds from the VOC definition was first set forth in the "Recommended Policy on Control of Volatile Organic Compounds" (42 FR 35314, July 8, 1977) and was supplemented most recently with the "Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans" (Interim

Guidance) (70 FR 54046, September 13, 2005). The EPA uses the reactivity of ethane as the threshold for determining whether a compound has negligible reactivity. Compounds that are less reactive than, or equally reactive to, ethane under certain assumed conditions may be deemed negligibly reactive and therefore suitable for exemption from the regulatory definition of VOC. Compounds that are more reactive than ethane continue to be considered VOCs for regulatory purposes and therefore are subject to control requirements. The selection of ethane as the threshold compound was based on a series of smog chamber experiments that underlay the 1977 policy.

The EPA has used three different metrics to compare the reactivity of a specific compound to that of ethane: (i) the reaction rate constant (known as k_{OH}) with the hydroxyl radical (OH); (ii) the maximum incremental reactivity (MIR) on a reactivity per unit mass basis; and (iii) the MIR expressed on a reactivity per mole basis. Differences between these three metrics are discussed below.

The k_{OH} is the reaction rate constant of the compound with the OH radical in the air. This reaction is typically the first step in a series of chemical reactions by which a compound breaks down in the air and participates in the ozone-forming process. If this step is slow, the compound will likely not form ozone at a very fast rate. The k_{OH} values have long been used by the EPA as a metric of photochemical reactivity and ozone-forming activity, and they have been the basis for most of the EPA's previous exclusions of negligibly reactive compounds from the regulatory definition of VOC. The k_{OH} metric is inherently a molar-based comparison, i.e., it measures the rate at which molecules react.

The MIR, both by mole and by mass, is a more recently developed metric of photochemical reactivity derived from a computer-based photochemical model. This metric considers the complete ozone forming activity of a compound on a single day, not merely the first reaction step.¹

The MIR values for compounds are typically expressed as grams of ozone formed per gram of VOC (mass basis), but may also be expressed as grams of ozone formed per mole of VOC (molar basis). For comparing the reactivities of two compounds, using the molar-based MIR values considers an equal number of molecules of the two compounds. Alternatively, using the mass-based MIR values compares an equal mass of the two compounds, which will involve different numbers of molecules, depending on the relative molecular weights. The molar-based MIR comparison is consistent with the original smog chamber experiments that underlie the original selection of ethane as the threshold compound, in that these experiments compared equal molar concentrations of individual VOCs. It is also consistent with previous reactivity determinations based on k_{OH} values, which are inherently molar-based. By contrast, the mass-based MIR comparison is more consistent with how MIR values and other reactivity metrics have been applied in reactivity-based emission limits, such as the national VOC emissions standards for aerosol coatings (40 CFR part 59 subpart E). Many other VOC regulations contain limits based upon a weight of VOC per volume of product, such as the EPA's regulations for limiting VOC emissions from architectural coatings (40 CFR part 59 subpart D). However, the fact that regulations are structured to measure VOC content by

¹ Further explanation of the MIR metric can be found in: W. P. L. Carter, "Development of Ozone Reactivity Scales for Volatile Organic Compositions," Journal of the Air & Waste Management Association, Vol. 44, 881-899, July 1994.

weight for ease of implementation and enforcement does not necessarily control whether VOC exemption decisions should be made on a weight basis as well.

The choice of the molar basis versus the mass basis for the ethane comparison can be significant. In some cases, a compound might be considered less reactive than ethane under the mass basis but not under the molar basis. For compounds with molecular weights higher than that of ethane, use of the mass basis results in more VOCs being classified as less reactive than ethane than use of the molar basis.

B. Petition to List the Following Compounds as Exempt: HCF₂OCF₂H (HFE 134), HCF₂OCF₂OCF₂H (HFE-236cal2), HCF₂OCF₂CF₂OCF₂H (HFE-338pcc13), and HCF₂OCF₂OCF₂CF₂OCF₂H (H-Galden 1040X and H-Galden ZT 130 (or 150 or 180))

On February 10, 2005, Solvay Solexis, Incorporated submitted to the EPA a petition requesting that four compounds in the family of products known by the trade name H-Galden be added to the list of compounds that are considered to be negligibly reactive in the definition of VOC at 40 CFR 51.100(s). These four compounds -- HCF₂OCF₂H (HFE-134), HCF₂OCF₂OCF₂H (HFE-236cal2), HCF₂OCF₂CF₂OCF₂H (HFE-338pcc13), and HCF₂OCF₂OCF₂CF₂OCF₂H (H-Galden 1040X and H-Galden ZT 130 (or 150 or 180)) -- can be used in some heat transfer applications (as refrigerants) and as fire suppressants.

With respect to the photochemical reactivity of the H-Galden compounds, Solvay Solexis, Incorporated provided information on the photochemical reactivity of its chemical compounds as measured by each compound's k_{OH} rate constant. Measurements of the reaction rate of HCF₂OCF₂H (HFE-134) with OH have been estimated at 298 K to be 2.3×10^{-15} (cm³/molecule-sec). This rate constant is highly temperature dependent and

decreases at lower temperatures. The calculated reaction rates for the three additional HFPEs as submitted by Solvay Solexis are 2.4×10^{-15} (cm³/molecule-sec) for HFE-236cal2, 4.7×10^{-15} (cm³/molecule-sec) for HFE-338pcc13, and 4.9×10^{-15} (cm³/molecule-sec) for H-Galden 1040X.² The k_{OH} values for these four HFPEs are significantly lower than the reaction rate for ethane which has a k_{OH} value of 2.4×10^{-13} (cm³/molecule-sec) at 298 K.

The scientific information that the petitioner submitted in support of the petition has been added to the docket for this rulemaking. This docketed information includes journal articles where the rate constant values can be found. Solvay Solexis, Incorporated submitted the following articles in support of its petition: (1) “Tropospheric Degradation Products of Novel Hydrofluoropolyethers,” Tuazon, *Environmental Science & Technology*, University of California, Riverside, May 1997; (2) “Hydrofluoropolyethers,” Marchionni, Silvani, Fontana, Malinverno, Visca, *Journal of Fluorine Chemistry*, Ausimont SpA, R & D Centre, 1999; and (3) “Toxicological Profile of Hydrofluoropolyethers,” Malinverno, Colombo, Visca, *Regulatory Toxicology and Pharmacology*, December, 2004.

Table 2 summarizes the information provided by the petitioner regarding the photochemical reactivity of the compounds under consideration. The data submitted by the petitioner support the contention that the reactivity of these compounds, with respect to reaction with the OH radical in the atmosphere, is lower than that of ethane.

² Although the petition listed H-Galden 1040X as having a k_{OH} value of 4.9×10^{-15} (cm³/molecule-sec) and the preamble to the proposed rule contained this value, EPA has found the actual value to be 4.6×10^{-15} (cm³/molecule-sec) according to the petitioner’s reference (2) in the following paragraph.

Table 2. Summary of reaction rates with OH (k_{OH}) reaction rate constant compared to ethane.

Chemical Formula	CAS Number	Name	k _{OH} (cm ³ /(molecule-sec))	k _{OH} ratio relative to ethane
C ₂ H ₆	74-84-0	Ethane	2.4x10 ⁻¹³	1.00
HCF ₂ OCF ₂ H	1691-17-4	HFE-134	2.3x10 ⁻¹⁵	0.01
HCF ₂ OCF ₂ OCF ₂ H	78522-47-1	HFE-236ca12	2.4x10 ⁻¹⁵	0.01
HCF ₂ OCF ₂ CF ₂ OCF ₂ H	188690-78-0	HFE-338pcc13	4.7x10 ⁻¹⁵	0.02
HCF ₂ OCF ₂ OCF ₂ CF ₂ OCF ₂ H	188690-77-9	H-Galden 1040X	4.6x10 ⁻¹⁵	0.02

Notes:

1. k_{OH} value for ethane is from: Atkinson, R., Baulch, D. L., Cox, R. A., Crowley, J. N., Hampson, Jr., R. F., Hynes, R. G., Jenkin, M. E., Kerr, J. A., Rossi, M. J., and Troe J. (2006) Evaluated kinetic and photochemical data for atmospheric chemistry: Volume II – gas phase reactions of organic species. Atmos. Chem. Phys. 6, 3625-4055.
2. k_{OH} values for the four compounds being exempted are from: G. Marchionni, R. Silvani, G. Fontana, G. Malinverno, M. Visca, “Hydrofluoropolyethers.” *Journal of Fluorine Chemistry*, 95 (1999) 41–50.

C. Likelihood of Risk to Human Health or the Environment

Information in the Solvay Solexis, Incorporated petition and its reference material indicates that the four HFPEs have low acute toxicity, no irritation or skin sensitization, and no detectable genotoxic activity *in vitro* or *in vivo*. The HFPEs show a similarly low potential for developmental toxicity. This toxicity information has been placed in the docket for this rulemaking.

Because HFPEs do not contain chlorine or bromine, these compounds do not contribute to the depletion of the ozone layer and have ozone depletion potential values of zero. In both the refrigeration and fire suppressant end uses, these HFPEs would be used as substitutes for ozone-depleting substances (ODS). All ODS substitutes must undergo review by the EPA's Significant New Alternatives Policy (SNAP) Program. The SNAP Program is EPA's program to evaluate and regulate substitutes for the ozone-depleting chemicals that are being phased out under the stratospheric ozone protection provisions of the CAA. In section 612(c) of the CAA, the agency is authorized to identify and publish lists of acceptable and unacceptable substitutes for class I or class II ozone-depleting substances.³ The EPA's SNAP program has evaluated the use of these four H-Galden HFPEs and found acceptable their use as fire suppressants in non-residential applications, in place of Halon 1211 (68 FR 4004, January 27, 2003). However, the SNAP program has not approved H-Galden HFPEs for certain other uses (i.e., solvent, aerosol propellant, foam blowing, and refrigeration). There currently is no submission pending review to list these substances as substitutes in other uses. Thus, at this time, it would be a violation of the CAA and the SNAP program regulations for any person to introduce H-Galden HFPEs into interstate commerce for use in other end uses regulated by the SNAP program. H-Galden HFPEs may be used in non-mechanical heat transfer as a secondary refrigerant in secondary-loop refrigeration systems without approval from SNAP; the EPA does not list, and does not currently require notification for, compounds

³ Information on the SNAP program can be found on the following webpage: www.epa.gov/ozone/snap.

that are used only as a secondary fluid in secondary-loop refrigeration systems (62 FR 10702; March 10, 1997).

Table 3 shows the 20 and 100 year global warming potentials (GWPs) of these four compounds relative to carbon dioxide (CO₂) as reported by the Intergovernmental Panel on Climate Change. These GWP-100 levels are comparable to mid-range levels associated with some chemical compounds that have previously been exempted from the VOC definition, which range from 23 to 12,000. In the January 27, 2003, SNAP rule, the EPA noted that despite their relatively high GWP values, the use of H Galden HFPEs was anticipated to have a smaller to comparable impact on global warming than the hydrofluorocarbons historically used in the same fire suppression application. Overall, the EPA concluded that H Galden HFPEs reduce risk compared to halon 1211, the ODS they replace.

Table 3. Summary of global warming potentials relative to CO₂ over 20 and 100 years for the four compounds being considered for VOC exemptions.

Chemical Formula	CAS Number	Name	GWP relative to CO₂ (20 years)¹	GWP relative to CO₂ (100 years)
HCF ₂ OCF ₂ H	1691-17-4	HFE-134	12200	6320
HCF ₂ OCF ₂ OCF ₂ H	78522-47-1	HFE-236ca12	8000	2800
HCF ₂ OCF ₂ CF ₂ OCF ₂ H	188690-78-0	HFE-338pcc13	5100	1500
HCF ₂ OCF ₂ OCF ₂ CF ₂ OCF ₂ H	188690-77-9	H-Galden 1040X	6320	1870
CO ₂	124-38-9	Carbon dioxide	1	1

Note

1. Forster, P., V. Ramaswamy, P. Artaxo, T. Berntsen, R. Betts, D.W. Fahey, J. Haywood, J. Lean, D.C. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz and R. Van Dorland, 2007: Changes in Atmospheric Constituents and in Radiative Forcing. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Having considered the available information on the likelihood of risk to human health or the environment from increased use of the chemicals considered here, we believe that current regulation of these compounds under other EPA programs adequately protects human health and the environment.

D. Conclusion

For all four compounds, the EPA proposed that (a) these chemicals qualify as negligibly reactive with respect to their contribution to tropospheric ozone formation, and (b) any non-tropospheric ozone-related risks associated with potential increased use are adequately addressed by other existing programs and policies.

III. Public Comments

We received no comments from the public.

IV. Final Action

The EPA is amending its definition of VOC at 40 CFR 51.100(s) to exclude a group of four HFPE's identified as $\text{HCF}_2\text{OCF}_2\text{H}$ (known as HFE-134), $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$ (known as HFE-236cal2), $\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$ (known as HFE-338pcc13), and $\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$ (known as H-Galden 1040X and also H-Galden ZT 130 (or 150 or 180)) as VOCs for ozone state implementation plans (SIP) and ozone control purposes. Consistent with the Interim Guidance, the EPA's final action on

the petition is based on a consideration of the contribution that each chemical makes to tropospheric ozone formation based on a comparison of reactivity metrics and on our assessment that existing programs or policies already adequately address the possibility that granting the petition would pose a significant risk to human health or the environment.

If an entity uses or produces any of these four HFPE compounds and is subject to the EPA regulations limiting the use of VOC in a product, limiting the VOC emissions from a facility, or otherwise controlling the use of VOC for purposes related to attaining the ozone NAAQS, then the compound will not be counted as a VOC in determining whether these regulatory obligations have been met. Emissions of this compound will not be considered in determining whether a proposed new or modified source triggers the applicability of Prevention of Significant Deterioration (PSD) requirements, in areas where the PSD program is implemented by the EPA or a delegated state, local or tribal agency. This action may also affect whether any of these four HFPE compounds are considered as VOCs for state regulatory purposes to reduce ozone formation, if a state relies on the EPA's definition of VOC. States are not obligated to exclude from control as a VOC those compounds that the EPA has found to be negligibly reactive. However, states may not take credit for controlling these compounds in their ozone control strategies.

The EPA is also amending its definition of VOC at 40 CFR 51.100(s) to make for clarity technical corrections to the current list of exempt compounds at 40 CFR 51.100(s)(1) by replacing several commas separating individual compounds with semicolons and by removing the erroneous "(1)" notation in

“(1) 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE–7300)” so that it reads “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE–7300).”

V. Statutory and Executive Orders Reviews

A. Executive Orders 12866: Regulatory Planning and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a “significant regulatory action” under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993), and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. Burden is defined at 5 CFR 1320.3(b). It does not contain any recordkeeping or reporting requirements.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the final rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) A small business that is a small industrial entity as defined in the U.S. Small Business Administration (SBA) size standards. (*See* 13 CFR 121.); (2) A governmental jurisdiction that is a

government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) A small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities.

D. Unfunded Mandates Reform Act

This action contains no federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531-1538 for state, local, or tribal governments or the private sector. The action imposes no enforceable duty on any state, local or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 and 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final action addresses the exemption of a set of chemical compounds from the VOC definition. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian Tribes, or on the distribution of power and responsibilities between the federal government and Indian Tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this rule.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in EO 12866. This action's health and risk assessments are contained in section II.C. of this preamble and within the docket for this rulemaking. While this final rule is not subject to the Executive Order, the EPA has reason to believe that ozone has a disproportionate effect on active children who play outdoors (62 FR 38856-38859, July 18, 1997). The EPA has not identified any specific studies on whether or to what extent the chemical compound may affect children's health.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113, section 12(d), (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs the EPA to provide Congress, through OMB, with explanations when the agency decides not to use available and applicable voluntary consensus standards. This final rulemaking does not involve technical standards. Therefore, the EPA is not considering the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, Feb. 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the *Federal Register*. A major rule cannot take effect until 60 days after it is published in the *Federal Register*. This action is not a “major rule” as defined by 5 U.S.C. 804(2). This rule will be effective on **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]**.

L. Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit Court within 60 days from the date the final action is published in the *Federal Register*. Filing a petition for review by the Administrator of this final action does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review must be final, and shall not postpone the effectiveness of such action. Thus, any petitions for review of this action related to the exemption of HCF₂OCF₂H (known as HFE-134), HCF₂OCF₂OCF₂H (known as HFE-236cal2), HCF₂OCF₂CF₂OCF₂H (known as HFE-338pcc13), and HCF₂OCF₂OCF₂CF₂OCF₂H (known as H-Galden 1040X and also H-Galden ZT 130 (or

150 or 180)) from the definition of VOC must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date final action is published in the *Federal Register*.

List of Subjects in 40 CFR Part 51

Environmental protection, Administrative practice and procedure, Air pollution control, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: February 4, 2013

Lisa P. Jackson,
Administrator.

For reasons set forth in the preamble, part 51 of chapter I of title 40 of the Code of Federal Regulations is amended as follows:

**PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND
SUBMITTAL OF IMPLEMENTATION PLANS**

1. The authority citation for part 51 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7412, 7413, 7414, 7470-7479, 7501-7508, 7601, and 7602.

§51.100 – [Amended]

2. Section 51.100 is amended at the end of paragraph (s)(1) introductory text by removing the words “methyl acetate, 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C₃F₇OCH₃, HFE–7000), 3-ethoxy- 1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE–7500), 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea), methyl formate (HCOOCH₃), (1) 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE–7300); propylene carbonate; dimethyl carbonate; trans-1,3,3,3-tetrafluoropropene; and perfluorocarbon compounds which fall into these classes:” and adding in their place the words “methyl acetate; 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C₃F₇OCH₃, HFE–7000); 3-ethoxy- 1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE–7500); 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea); methyl formate (HCOOCH₃); 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE–7300); propylene carbonate; dimethyl carbonate; *trans*-1,3,3,3-tetrafluoropropene; HCF₂OCF₂H (HFE-134); HCF₂OCF₂OCF₂H (HFE-236cal2); HCF₂OCF₂CF₂OCF₂H (HFE-338pcc13); HCF₂OCF₂OCF₂CF₂OCF₂H (H-Galden 1040x

or H-Galden ZT 130 (or 150 or 180)); and perfluorocarbon compounds which fall into these classes:”.

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